

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 2A. This sheet, which includes Fig. 2A, replaces the original sheet including Fig. 2A.

Attachment: 1 Replacement Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Claims 1-12 and 19-28 are pending. Claims 13-18 are canceled without prejudice or disclaimer. Claims 22-28 are newly added. Support for newly added Claim 22 can be found at paragraphs [0029] - [0030] of the published application, and in Figs. 1, 2A, and 2B, for example. Support for newly added Claims 23-27 can be found in Fig. 2A, for example. Support for newly added Claim 28 can be found in paragraph [0040] and in Fig. 2B, for example. No new matter is added.

In the outstanding Office Action, the drawings were objected to for not having labeled a "first hole," "second hole," "first diameter," "second diameter," "recessed area," and "a spring with an axis." Claim 20 was rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Claim 21 was rejected under 35 U.S.C. § 112, second paragraph as lacking antecedent basis in the claim for the limitation "ball." Claims 1-4, 6, 11, 12, 19, and 21 were rejected under 35 U.S.C. § 103(a) as obvious over Maydan et al. (U.S. Patent No. 5,746,875, herein "Maydan") in view of Halder et al. (U.S. Patent No. 5,845,898, herein "Halder"). Claims 5 and 7-9 were rejected under 35 U.S.C. § 103(a) as obvious over Maydan, Halder and Dornfest (U.S. Patent No. 5,680,013, herein "Dornfest"). Claim 10 was rejected under 35 U.S.C. § 103(a) as obvious over Maydan in view of Halder and further in view of Moser (U.S. Patent No. 6,686,302, herein "Moser").

At the outset, Applicant notes with appreciation the courtesy of a personal interview granted to Applicant's representatives conducted on October 5, 2006. The substance of the personal interview is substantially summarized in the comments below and in combination with the Interview Summary provided by the Examiner in accordance with MPEP § 713.04.

As discussed in the personal interview, dependent claims are added in this response and will be entered by the Examiner as the Examiner and Applicant agree that this is the most efficient way to advance prosecution.

Regarding the objection to the drawings as not having labeled “first hole,” “second hole,” “first diameter,” “second diameter,” “recessed area,” and “a spring with an axis,” that rejection is respectfully traversed by the present response.

Applicant notes that Fig. 5B, reference numeral (650) refers to a “transverse spring” as discussed in paragraph [0052] of the published application. Accordingly, Applicant respectfully submits that the objection to the drawings for not having labeled “a spring with an axis” as recited in dependent Claim 21 is overcome.

Regarding the “first hole,” “second hole,” “first diameter,” “second diameter,” and “recessed area,” Applicant respectfully submits that the replacement Fig. 2A included with this response includes reference numbers pointing to features of the original Fig. 2A corresponding to each of the elements listed in the objection to the drawings. Accordingly, Applicant respectfully submits that replacement Fig. 2A in correlation with the amendment to the specification to include the newly added reference numbers overcomes the objection to the drawings.

Regarding the rejection of Claim 20 as failing to comply with the enablement requirement for reciting “blind hole,” that rejection is respectfully traversed by the present response. A blind hole is a term of art used in the field of machining holes in material. Applicant respectfully submits that a person of ordinary skill in the art would understand the term “blind hole,” and Applicant has provided a definition of the term from an online glossary of terms used in this art as follows: “Blind Hole: A hole made in a workpiece that does not pass through it.”<sup>1</sup>

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<sup>1</sup> <http://www.diracdelta.co.uk/science/source/b/1/blind%20hole/source.html> (last visited October 9, 2006).

Regarding the rejection of Claim 21 as indefinite, Applicant respectfully submits that Claim 21 recites “a ball” in the first instance to which a ball is referred. Accordingly, Applicant respectfully submits that Claim 21 provides sufficient antecedent basis for the term “ball,” and the rejection of Claim 21 as indefinite is overcome.

Regarding the rejection of Claims 1-4, 6, 11, 12, 19, and 21 as obvious over Maydan in view of Halder, that rejection is respectfully traversed by the present response.

Independent Claim 1 recites:

A plasma processing device comprising:  
an inject plate including a first hole with a first diameter;  
an upper electrode including a second hole with a recessed area having a second diameter larger than the first diameter; and  
a hybrid ball-lock device configured to removably secure the inject plate to the upper electrode by expanding into the recessed area.

Accordingly, the hybrid ball-lock device is configured to secure the inject plate to the upper electrode by expanding into the recessed area. The recessed area is in the upper electrode and has a diameter larger than the diameter of a hole in the inject plate.

The outstanding Office Action points to Maydan for the feature of an inject plate with a first hole with a first diameter and for the feature of an upper electrode including a second hole with a recessed area having a second diameter larger than the first diameter.<sup>2</sup>

The outstanding Office Action points to Halder for the feature of a ball-lock device and states that it would have been obvious to use the ball-lock device of Halder as a replacement for the **bolts** shown in Fig. 7E of Maydan.<sup>3</sup>

However, as discussed in the personal interview, there is no relationship between the holes made for the bolts shown in Fig. 7E of Halder and the area pointed to in the outstanding Office Action for the feature of a recessed area. Rather, the area pointed to in the outstanding

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<sup>2</sup> Outstanding Office Action, page 4.

<sup>3</sup> Outstanding Office Action, page 6.

Office Action for the recessed area is completely unrelated to the bolts holding the mounting ring (137) to the lid (10). As shown in Fig. 7E, the liner element (46) rests within the stepped cavity of the lid (10), and the stepped cavity is not in contact with the bolts. The stepped cavity is relied on in the outstanding Office Action for the feature of a recessed area with a diameter larger than a diameter of a first hole. Thus, as discussed in the personal interview, even if a person of ordinary skill in the art were to substitute the ball-lock device of Halder for the bolts of Maydan, no part of the ball-lock device of Halder would secure the inject plate to the upper electrode **by expanding into the recessed** area as recited in independent Claim 1. Accordingly, Applicant respectfully submits that no reasonable combination of Maydan and Halder would include all of the features recited in independent Claim 1.

Claims 2-4, 6, 11, 12, 19, and 21 depend, directly or indirectly, from independent Claim 1 and patentably distinguish over any reasonable combination of Maydan and Halder for at least the same reasons as independent Claim 1 does.

Regarding the rejection of Claims 5 and 7-9 as obvious over Mayden, Halder, and Dornfest, Applicant respectfully submits that the outstanding Office Action relies on Dornfest for specific materials recited in dependent claims, and Dornfest is unrelated to a hybrid ball-lock device used in the specific arrangement recited in Claim 1. Accordingly, Dornfest fails to remedy the deficiencies discussed above regarding any reasonable combination of Maydan and Halder, and Claims 5 and 7-9 patentably distinguish over any reasonable combination of Maydan, Halder and Dornfest.

Regarding the rejection of Claim 10 as obvious over Maydan in view of Halder and Moser, Applicant respectfully submits that Moser fails to remedy the deficiencies discussed above regarding Maydan and Halder. Rather, Moser relates to a corrosion resistant steel material and does not disclose a hybrid ball-lock device configured to removably secure an inject plate to an upper electrode by expanding into a recessed area as recited in independent

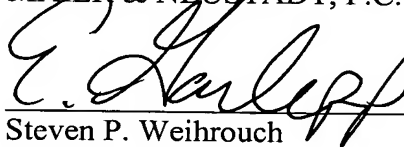
Claim 1. Accordingly, Applicant respectfully submits that independent Claim 1 and Claim 10 depending therefrom patentably distinguish over any reasonable combination of Maydan, Halder, and Moser.

Newly added dependent Claims 22-28 recite features disclosed in the original specification, but not previously claimed. In addition to distinguishing over any reasonable combination of the references of record by virtue of their dependencies, newly added dependent Claims 22-28 patentably distinguish over the cited references for their own features as well.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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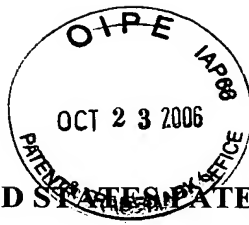
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Docket No.: 250826US26YA



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: Steven T. FINK

SERIAL NO.: 10/808,388

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EXAMINER: Zervigon, Rudy

FOR: HYBRID BALL-LOCK ATTACHMENT APPARATUS

LETTER SUBMITTING REPLACEMENT DRAWING SHEET(S)

COMMISSIONER FOR PATENTS  
Alexandria, VA 22313

SIR:

Responsive to the below indicated communication, the following drawing sheets are submitted herewith:

☒ 1 Replacement Drawing Sheets ☐ \_\_\_\_\_ New Drawing Sheets

☒ Official Action dated July 26, 2006

☐ Notice of Allowance/Issue Fee dated \_\_\_\_\_

☐ Other dated \_\_\_\_\_

The changes and/or modifications made include the following:

Drawings are being submitted to meet the requirements of the U.S.P.T.O.

Respectfully Submitted,

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